

## Renewable Energy Conversion Systems Ordinance

The intent of this local law is to promote and protect the health, safety and general welfare of the citizens of the Town of Dryden by creating a Local Law regulating the installation of residential, commercial and industrial Renewable Energy Conversion Systems within the Town of Dryden. This ordinance deals primarily with Wind Energy Conversion Systems as defined herein, but also addresses the use of other Renewable Energy Conversion Systems such as solar panels, geothermal heat pumps and other devices (see Exemptions below).

The Comprehensive Plan and Zoning Regulations are intended to conserve the natural beauty of the land, its lakes streams, forests and hills, so that Dryden may be enjoyed to the fullest by this and succeeding generations of town residents and visitors.

These regulations will regulate and restrict the height, size, location and other features of wind energy conversion systems, and will after reasonable consideration of the character of the Town and its peculiar suitability for particular uses, conserve and enhance natural resources and land values and protect the existing properties and environment.

§§ 170-40 Residential Wind Energy Conversion Systems, 170-41 Commercial Wind Energy Conversion Systems, and 170-42 Industrial Wind Energy Conversion Systems, with language as detailed below, are hereby added as an amendment to the Zoning Ordinance of the Town of Dryden.

### § 170-40 Residential Wind Energy Conversion Systems

#### A. Application Process

##### (1) Special Use Permit

A special use permit shall be required. Therefore, Article XIII of the Dryden Zoning Ordinance will apply.

##### (2) SEQR

A completed Short Environmental Assessment Form and a Visual Assessment Addendum is required.

#### B. Placement.

##### (1) Setbacks, Ice and Blade Throw

Setbacks from adjacent property lines, rights of way, easements, public ways or power lines (not to include individual residential feed line) shall be equivalent to the collapse zone of the structure plus 10 feet.

##### (2) Districts Allowed In

Residential wind energy conversion systems are allowed on all residential lots in all zones in the Town of Dryden providing that the lots are adequate to accommodate the requirements in this section.

##### (3) Number of Wind Energy Conversion Systems Allowed Per Parcel

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There is no limit to the number of residential wind energy conversion systems allowed on a residential parcel allowing that all physical requirements are met in accordance with this law. Setback requirements apply to each wind energy conversion system as an accessory structure. Multiple parcels owned, controlled or beneficially managed by a person or persons, entity, or related entities, shall be considered to be one parcel.

### (4) Noise Level Limit

Individual wind energy conversion system towers shall be located with relation to property lines so that the level of noise produced during wind energy conversion system operation shall not exceed 55 dbA, measured at the boundaries of all of the closest parcels that are owned by non-site owners and that common by the owner of the site parcel as those boundaries exist at the time of special use permit application.

### (5) Guy Wires and Anchors

All guy wires or cables shall be marked with high-visibility orange or yellow sleeves from the ground to a point ten (10) feet above the ground.

### (6) Lighting

No wind energy conversion system tower shall be lighted artificially unless such lighting is required by a state or federal agency. Use of nighttime, and overcast daytime condition stroboscopic lighting to satisfy tower facility lighting requirements for the Federal Aviation Administration shall be subject to on-site field testing before the Town Board, as a prerequisite to that board's approval, with specific respect to subdivision (b) as it applies to existing residential or commercial uses within 2000 feet of each tower for which such strobe lighting is proposed.

### (7) Scenic/View Impact

No wind energy conversion system shall be installed in a location where the Town Board determines the wind energy conversion system to be detrimental to the general neighborhood character. No individual tower facility shall be installed in any location that would substantially detract from or block view of a portion of a scenic view, as viewed from any public road right of way, publicly owned land or privately owned land within the Town of Dryden.

### (8) Broadcast Interference

- a) No individual tower facility shall be installed in any location along the major axis of an existing microwave communications link where its operation is likely to produce electromagnetic interference in the link's operation.
- b) No individual tower facility shall be installed in any location where its proximity with existing fixed broadcast, retransmission, or reception antenna (including residential reception antenna) for radio, television, or wireless phone or other personnel communication systems would produce electromagnetic interference with signal transmission or reception.
- c) The recipient of the special use permit must correct any unforeseen interference to the satisfaction of the Town Board within sixty (60) days of any complaint.

### (9) Location on Lot

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Wind energy conversion system location is not restricted to rear or side yards. The Zoning Officer shall address location on lot within the Zoning Permit Application.

### C. Specifications.

#### (1) Maximum Height Limit

Maximum height limit shall be no greater than 150 feet (tower plus blade length).

#### (2) KW Limit per wind generating device

20KW.

#### (3) Color

Residential wind energy conversion systems may be any color unless the Town Board or an agency of the state or federal government mandates something different for environmental or safety reasons.

#### (4) Structure Type

Lattice or monopole. Other structures may be considered.

#### (5) Type

All types of wind energy conversion systems will be allowed. Those suggested and endorsed by the New York State Energy Research Development Authority are preferred.

#### (6) Design and Specifications

Detailed design and specifications will be required during site plan review.

#### (7) Wildlife Impact Mitigation Measures

- a) No bird migration or bat impact study shall be required for residential WECS unless required by the Town or any state or federal agency. The Town Board may request review by the Conservation Board. The Conservation Board may require a bird migration and bat impact analysis.
- b) The project sponsor must consult the United States Fish and Wildlife Service and the New York State Natural Heritage Program for information regarding possible impacts to Rare Threatened and Endangered Species and provide proof of this consultation.
- c) The WECS will not create artificial habitat for raptors or raptor prey such as electrical boxes, perching opportunities etc.
- d) Wind energy conversion systems shall be set back at least 2,500 feet from Important Bird Areas as identified by New York Audubon and at least 1,500 feet from State-identified wetlands. Setbacks from federally designated wetlands may be required depending upon character and type. These distances may be adjusted to be greater or lesser at the discretion of the Town Board based upon evidence of flight patterns of resident and migratory birds.

#### (8) Ice Buildup Sensors

Ice buildup sensors are not required for residential wind energy conversion systems.

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## (9) Connecting Cables

All power transmission lines from the wind energy conversion system electricity generation facilities shall be underground.

## (10) Blade to Ground Distance

The lowest portion of the blade may not be closer than 15 feet to the ground.

## D. Notice and Safety Considerations

### (1) Signs.

#### a) Caution Signs

Caution Signs shall be placed at the setback limits warning of ice and blade throws. Signs shall be placed at 100 foot intervals and be 4 to 6 feet high (at eye level). Said signs shall be a minimum of one foot square and no larger than two square feet in size and shall have the words "CAUTION: FALLING OBJECTS" printed thereon. In addition, the owner's name and address shall be printed thereon.

#### b) Other signs

There shall be no other sign affixed to the wind energy conversion system, accessory buildings or enclosure unless required by the Town or a state or federal agency.

### (2) Fencing

Access to the WECS shall be limited either by means of a fence six (6) feet high around the tower base with a locking gate or by limiting WECS climbing apparatus to no lower than twelve (12) feet from the ground.

### (3) Limit Tip Speed

No wind energy conversion systems shall be permitted that lacks an automatic braking, governing, or feathering system.

## E. Operating Considerations

### (1) Removal if Not Operational

Any WECS, which has not been in active and continuous service for a period of one (1) year, shall be disassembled on the premises. Any and all structures, guy cables, guy anchors and/or enclosures accessory to such wind energy conversion system shall also be disassembled. Disassembling shall be completed within six (6) months of the cessation of active and continuous use of such wind energy conversion system.

### (2) Landscaping

Upon completion of installation the site shall be returned as close as possible to its natural state.

### (3) Building and Grounds Maintenance

Any damaged or unused parts shall be removed from the premises within thirty (30) days or kept in an on-site storage building.

(4) Ownership Changes

If the ownership of a wind energy conversion system operating under a special use permit changes, the special use permit shall remain in force. All conditions of the special use permit, including bonding, letters of credit or continuing certification requirements of the original owner will continue to be obligations of succeeding owners. However, the change in ownership shall be registered with the Director of Building and Zoning, and the sign required under subdivision 170-40 D (1)(a) shall be changed accordingly.

(5) Wind Energy Conversion System Modifications

Any and all modifications, additions, deletions or changes to wind energy conversion systems that operate under a special use permit, whether structural or not, shall be made by special use permit, except that such permit shall not be required for repairs which become necessary in the normal course of use of such wind energy conversion system or become necessary as a result of natural forces, such as wind or ice.

F. Certifications.

(1) Routine Inspection Report

An inspection report prepared by an independent professional engineer licensed in the State of New York and preferably registered by NYSERDA will be required at the time of installation. The inspection report required at the time of installation will be for the structure and the electronics and will be given to the Code Enforcement Officer.

(2) Insurance – Liability

Prior to issuance of a building permit, the applicant shall provide the Town proof, in the form of a duplicate insurance policy or a certificate issued by an insurance company, of liability insurance, of a level to be determined by the Town Board in consultation with the Town's Attorney, to cover damage or injury which might result from the failure of a tower or towers or any other part(s) of the generation and transmission facility.

(3) National and State Standards

The applicant shall show that all applicable New York State and U.S. standards for the construction, operation and maintenance of the proposed wind energy conversion system have been met or are being complied with. Wind energy conversion systems shall be built, operated and maintained to applicable industry standards of the Institute of Electrical and Electronic Engineers (IEEE) and the American National Standards Institute (ANSI). The applicant for a wind energy conversion system special use permit shall furnish evidence, over the signature of a professional engineer licensed to practice in the State of New York, that such wind energy conversion system is in compliance with such standards.

(5) Lightning Strike/Grounding

The applicant shall show that all applicable New York State and U.S. standards for the construction, operation and maintenance of the proposed wind energy conversion system have been met or are being complied with.

(6) Wind Speed/Wind Load

## DRAFT for Review

Certification is required by a registered professional engineer or manufacturer's certification that the tower design is sufficient to withstand wind-load requirements for structures as established by the Building Code of New York State.

### (7) Continuing Obligations

All requirements detailed in subdivisions 170-40.F (1-7) above remain in force for the life of the special use permit.

## § 170-41. Commercial Wind Energy Conversion Systems

### A. Application Process

#### (1) Special Use Permit

A special use permit shall be required. Therefore, Article XXIII of the Dryden Code will apply.

#### (3) State Environmental Quality Review

A completed Short Environmental Assessment Form and Visual Assessment Addendum are required.

### B. Placement

See Section 170-40 (B)

#### (2) Districts Allowed In

Commercial Wind energy conversion systems that meet the physical and environmental criteria set forth in section 170-40 are allowed upon all commercial properties in all zones.

#### (3) Number of Wind energy conversion systems Allowed per Parcel

See Section 170-40 B(3)

#### (4) Noise Level Limit

See Section 170-40 B(4)

#### (5) Guy Wires and Anchors

See Section 170-40 B(5)

#### (6) Lighting

See Section 170-40 B(6)

#### (7) Scenic/View Impact

See Section 170-40 B(7)

#### (8) Broadcast Interference

See Section 170-40 B(8)

#### (9) Location on Lot.

See Section 170-40 B(9)

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## C. Specifications

### (1) Maximum Height Limit

Maximum height limit (from base to tip of blade) shall be no greater than 150 feet.

### (2) KW Limit

20 KW.

### (3) Color

See Section 170-40 C(3)

### (4) Structure

See Section 170-40 C(4)

### (5) Type

All types of wind energy conversion systems will be allowed.

### (6) Design and Specifications

Detailed design and specification will be required during site plan review.

### (7) Bird Migration Study

See Section 170-40 C(7)

### (8) Ice Buildup Sensors

Ice buildup sensors are not required for commercial wind energy conversion systems.

### (9) Connecting Cables

All power transmission lines from the wind energy conversion system electricity generation facilities shall be underground.

### (10) Blade to Ground Distance

The lowest portion of the blade may not be closer than 15 feet to the ground.

## D. Notice and Safety Considerations

### (1) Signs

#### c) Caution Signs

Caution Signs shall be placed at the setback limits warning of ice and blade throws. Signs shall be placed at 100 foot intervals and be 4 to 6 feet high (at eye level). Said signs shall be a minimum of one foot square and no larger than two square feet in size and shall have the words "CAUTION: FALLING OBJECTS" printed thereon. In addition, the owner's name and address shall be printed thereon.

#### d) Other signs

There shall be no other sign affixed to the wind energy conversion system, accessory buildings or enclosure.

# DRAFT for Review

## (2) Fencing

Access to the tower shall be limited either by means of a fence six (6) foot high around the tower base with a locking gate or by limiting tower climbing apparatus to no lower than twelve (12) feet from the ground.

## (3) Limit Tip Speed

No wind energy conversion systems shall be permitted that lack an automatic braking, governing, or feathering system to prevent uncontrolled rotation, overspeeding, and excessive pressure on the tower structure, rotor blades, and turbine components.

## E. Operating Considerations

### (1) Removal if Not Operational

Any wind energy conversion system, which has not been in active and continuous service for a period of one (1) year, shall be removed from the premises to a place of safe and legal disposal. Any and all structures, guy cables, guy anchors and/or enclosures accessory to such wind energy conversion system shall also be removed. Such removal shall be completed within six (6) months of the cessation of active and continuous use of such wind energy conversion system.

### (2) Landscaping

Upon completion of installation the site shall be returned as close as possible to its natural state.

### (3) Building and Grounds Maintenance

Any damaged or unused parts shall be removed from the premises within thirty (30) days or kept in an on-site storage building.

### (4) Ownership Changes

If the ownership of a wind energy conversion system operating under a special use permit changes, the special use permit shall remain in force. All conditions of the special use permit, including bonding, letters of credit or continuing certification requirements of the original owner will continue to be obligations of succeeding owners. However, the change in ownership shall be registered with the Code Enforcement Officer, and the sign required under subdivision 170-40.D(1)(a) shall be changed accordingly.

### (5) Wind energy conversion system Modifications

Any and all modifications, additions, deletions or changes to wind energy conversion systems that operate under a special use permit, whether structural or not, shall be made by special use permit, except that such permit shall not be required for repairs which become necessary in the normal course of use of such wind energy conversion system or become necessary as a result of natural forces, such as wind or ice.

## F. Certifications.

### (1) Routine Inspection Report



## DRAFT for Review

An inspection report prepared by an independent professional engineer licensed in the State of New York and preferably registered by NYSERDA will be required at the time of installation. The inspection report required at the time of installation will be for the structure and the electronics and will be given to the Code Enforcement Officer.

### (2) Insurance – Liability

Prior to issuance of a building permit, the applicant shall provide the Town proof, in the form of a duplicate insurance policy or a certificate issued by an insurance company, of liability insurance, of a level to be determined by the Town Board in consultation with the Town's Attorney, to cover damage or injury which might result from the failure of a tower or towers or any other part(s) of the generation and transmission facility.

### (3) National and State Standards

The applicant shall show that all applicable New York State and U.S. standards for the construction, operation and maintenance of the proposed wind energy conversion system have been met or are being complied with. Wind energy conversion systems shall be built, operated and maintained to applicable industry standards of the Institute of Electrical and Electronic Engineers (IEEE) and the American National Standards Institute (ANSI). The applicant for a wind energy conversion system special use permit shall furnish evidence, over the signature of a professional engineer licensed to practice in the State of New York, that such wind energy conversion system is in compliance with such standards.

### (5) Lightning Strike/Grounding

The applicant shall show that all applicable New York State and U.S. standards for the construction, operation and maintenance of the proposed wind energy conversion system have been met or are being complied with.

### (6) Wind Speed/Wind Load

Certification is required by a registered professional engineer or manufacturer's certification that the tower design is sufficient to withstand wind-load requirements for structures as established by the Building Code of New York State.

### (7) Continuing Obligations

All requirements detailed in subdivisions 170-40.F(1-7) above remain in force for the life of the special use permit.

## **§ 170-42. Industrial Wind energy conversion systems**

At this time the potential environmental impacts of Industrial Wind Energy Conversion System electricity generating facilities within the Town of Dryden, and the public response to previously proposed projects, it is the determination of the Town of Dryden Town Board that Industrial Wind Energy Conversion Systems are not compatible with the health, safety or general welfare of the citizens of the Town, and are therefore not a permitted use within the boundaries of the Town of Dryden.

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## **Additional References to Wind energy conversion systems in Zoning Code**

The following sections of the Town of Dryden Zoning Ordinance shall be amended to include:

§ 701 add: (7) Renewable Energy Conversion System.

§ 705 add: (2) Residential Wind energy conversion systems. (3) Commercial Wind energy conversion systems.

§ 751 add (14) Renewable Energy Conversion Systems.

§ 752 add: (3) Residential Wind energy conversion systems. (4) Commercial Wind energy conversion systems.

§ 801 add: (13) Renewable Energy Conversion Systems.

§ 802 add: (11) Residential Wind energy conversion systems. (12) Commercial Wind energy conversion systems.

§ 1201 add: (16) Renewable Energy Conversion Systems.

§ 1203 add: (1) Commercial Wind energy conversion systems.

## **Exemptions**

All other Renewable Energy Conversion Systems, such as solar conversion systems, geothermal etc., as defined herein are exempt from these regulations but shall require a zoning permit and a building permit.

Helical and other wind energy conversion systems that produce a nominal amount of energy do not pose a significant threat to the public or the resources of the Town of Dryden and are generally ornamental in nature are exempt from these regulations.

## **Definitions.**

The Town Board hereby adds the following definitions to Appendix A Definitions.

**“Break Point”** means the location on a tower, which in the event of a failure of the tower, would result in the tower falling or collapsing.

**“Collapse Zone”** means the area in which any portion of a Telecommunications Tower could or would fall, collapse or plunge to the ground or into a river, wetland or other body of water. The collapse zone shall be no less than the lateral equivalent of the distance from the Break point to the top of the structure plus ten feet, such being not less than one-half (1/2) the height of the structure.

**“Renewable Energy Conversion Systems”** means an energy conversion system utilizing renewable sources of energy, excluding wind energy conversion systems as defined herein, including but not limited to: solar conversion systems (Photovoltaic, water etc.), geothermal, Hydrogen Fuel Cell, Biomass (wood, corn, hay), et cetera.

## DRAFT for Review

**“Wind Energy Conversion System”** means a device that converts that kinetic energy of the wind, by the use of a set of rotating blades and is usually elevated from ground level on a tower, into electrical or mechanical power.

**“Wind Energy Conversion System, Residential”** means a wind energy conversion system that provides electrical or mechanical power to an individual residence and can be either the primary or a secondary source of energy. Sale or credit of excess electricity to the utility grid is permitted as a tertiary use.

**“Wind Energy Conversion System Commercial”** means a wind energy conversion system that provides electrical or mechanical power to an individual home occupation, farm, or other single commercial enterprise and can be either the primary or a secondary source of energy. Sale or credit of excess electricity to the utility grid is permitted as a tertiary use.

**“Wind Energy Conversion System, Industrial”** means a wind energy conversion system, or series of wind energy conversion systems in a facility, whose sole purpose is to generate electricity that is fed into a power grid for sale.

**“Wind Energy Conversion System Height”** means the total height of the structure including blades.

### **Severability Clause.**

If any section, paragraph, subdivision or provision of this local law shall be held invalid, such invalidity shall apply only to the section, paragraph, subdivision or provision adjudged invalid, and the rest of this local law shall remain valid and effective.

### **Effective Date.**

All provisions of this local law take effect upon filing by the Town Clerk with the New York Secretary of State.